

WO 00/13330

PCT/GB99/02873

- 21 -

## CLAIMS

1. A mobile telephone carrying casing which can encase, contain and protect a mobile telephone carried thereby, wherein:

the casing is an integer separate and independent from the carried mobile telephone which consists wholly or principally of a rigid plastics material;

- the casing comprises at least two parts, defining front and rear components, the front component encasing the front face of the mobile telephone and the rear component encasing the rear face of the mobile telephone, the components meeting in a line spaced apart from the front and rear faces of these components; and

the casing allows a user to operate the encased mobile telephone whilst carried in the casing.

2. A mobile telephone carrying casing as claimed in claim 1 wherein no part of the encased mobile telephone extends beyond the casing.

3. A mobile telephone carrying casing as claimed in claim 1 or claim 2 wherein the front and rear components meet in a plane substantially parallel to the front and rear faces.

4. A mobile telephone carrying casing as claimed in claim 1 or claim 2 wherein the meeting line between front and rear components is non-linear.

5. A mobile telephone carrying casing as claimed in claim 4 wherein the non-linear meeting line is of castellated form.

WO 00/13330

PCT/GB99/02873

- 22 -

6. A mobile telephone carrying casing as claimed in any one of the preceding claims wherein the front and rear components are attached by connecting means.

5 7. A mobile telephone carrying casing as claimed in claim 6 wherein the front and rear components are releasably attached by the connecting means.

10 8. A mobile telephone carrying casing as claimed in claim 6 or claim 7 wherein the connecting means includes hinges.

15 9. A mobile telephone carrying casing as claimed in any one of claims 6 to 8 wherein the connecting means comprises one or more clips located on one or more of the components which releasably fasten to opposing mating hooks or recesses provided on another component.

20 10. A mobile telephone carrying casing as claimed in claim 6 wherein the connecting means comprises a tongue and groove arrangement, with one or more tongues provided on one or more of the components which are slidably held in one or more grooves  
25 provided on another component.

30 11. A mobile telephone carrying casing as claimed in claim 10 wherein the connecting means further comprises one or more clips located on one or more of the components which releasably fasten to opposing mating hooks or recesses provided on another component.

35 12. A mobile telephone carrying casing as claimed in any one of the preceding claims wherein the rear

WO 00/13330

PCT/GB99/02873

- 23 -

component comprises a removable panel which allows access to the interior of the casing when the front and rear components are joined together.

- 5 13. A mobile telephone carrying casing as claimed in any one of the preceding claims wherein the front component comprises a removable panel which allows access to the interior of the casing when the front and rear components are joined together.

10

14. A mobile telephone carrying casing as claimed in any one of the preceding claims wherein at least one component is provided with electromagnetic radiation screening means which attenuates electromagnetic radiation.

15

15. A mobile telephone carrying casing as claimed in claim 14 wherein the electromagnetic radiation screening means provides a shield positioned between a head of a user and the encased mobile telephone.

20

16. A mobile telephone carrying casing as claimed in claim 14 or claim 15 wherein the electromagnetic radiation screening means causes attenuation of the electromagnetic radiation only on the side of the casing nearest a head of a user, the electromagnetic radiation being free to radiate from the remainder of the casing without attenuation.

25

- 30 17. A mobile telephone carrying casing as claimed in any one of claims 14 to 16 wherein the electromagnetic radiation screening means is selectively incorporated in one or more desired regions of the casing.

- 35 18. A mobile telephone carrying casing as claimed in

WO 00/13330

PCT/GB99/02873

- 24 -

any one of claims 14 to 17 wherein the electromagnetic screening means comprises a coating applied to a surface of one or more of the components of the casing.

5

19. A mobile telephone carrying casing as claimed in claim 18 wherein the coating contains metallic particles.

10

20. A mobile telephone carrying casing as claimed in claim 19 wherein the metallic particles are nickel.

21. A mobile telephone carrying casing as claimed in claim 19 wherein the metallic particles are copper.

15

22. A mobile telephone carrying casing as claimed in claim 19 wherein the metallic particles are silver.

23. A mobile telephone carrying casing as claimed in claim 19 wherein the metallic particles are gold.

20

24. A mobile telephone carrying casing as claimed in claim 19 wherein the metallic particles are alloys of two or more metals.

25

25. A mobile telephone carrying casing as claimed in claim 24 wherein the metallic particles are alloys of nickel and copper.

30

26. A mobile telephone carrying casing as claimed in claim 24 wherein the metallic particles are alloys of nickel and silver.

35

27. A mobile telephone carrying casing as claimed in claim 24 wherein the metallic particles are alloys of

0018655234478

WO 00/13330

PCT/GB99/02873

- 25 -

nickel and gold.

28. A mobile telephone carrying casing as claimed in  
claim 24 wherein the metallic particles are alloys of  
copper and silver.

29. A mobile telephone carrying casing as claimed in  
claim 24 wherein the metallic particles are alloys of  
copper and gold.

30. A mobile telephone carrying casing as claimed in  
claim 24 wherein the metallic particles are alloys of  
silver and gold.

31. A mobile telephone carrying casing as claimed in  
any one of claims 18 to 30 wherein the coating is a  
paint.

32. A mobile telephone carrying casing as claimed in  
any one of claims 18 to 31 wherein the coating is  
sprayed on a surface of one more components.

33. A mobile telephone carrying casing as claimed in  
claim 32 wherein the coating is sprayed on an interior  
surface one or more components.

34. A mobile telephone carrying casing as claimed in  
any one of claims 18 to 31 wherein the coating is  
sprayed on a plurality of surfaces of one or more  
components.

35. A mobile telephone carrying casing as claimed in  
any one of claims 14 to 17 wherein the electromagnetic  
radiation screening means comprises a mesh.

WO 00/13330

PCT/GB99/02873

- 26 -

36. A mobile telephone carrying casing as claimed in claim 35 wherein the mesh comprises a metal.

5 37. A mobile telephone carrying casing as claimed in claim 35 wherein the mesh comprises an alloy of metal.

38. A mobile telephone carrying casing as claimed in claim 35 wherein the mesh comprises a composite material.

10

39. A mobile telephone carrying casing as claimed in any one of claims 35 to 38 wherein the mesh comprises apertures whose maximum dimension is less than one half of a wavelength of the smallest wavelength electromagnetic radiation emitted by the carried mobile telephone.

15

20

40. A mobile telephone carrying casing as claimed in any one of claims 14 to 39 wherein the electromagnetic radiation screening means provided in the casing forms a screen between a head of a user and the sources of electromagnetic radiation in the carried mobile telephone.

25

41. A mobile telephone carrying casing as claimed in any one of claims 14 to 40 wherein the electromagnetic radiation screening means is selectively positioned in the casing so that it does not impair the function of the mobile telephone.

30

42. A mobile telephone carrying casing as claimed in any one of the preceding claims which comprises an aperture for alignment with an earpiece of the mobile telephone carried thereby.

35

WO 00/13330

PCT/GB99/02873

- 27 -

43. A mobile telephone carrying casing as claimed in any one of the preceding claims which comprises an aperture for alignment with a microphone of a mobile telephone carried thereby.

5

44. A mobile telephone carrying casing as claimed in any one of the preceding claims which comprises an aperture through which function keys of the carried mobile telephone are accessible.

10

45. A mobile telephone carrying casing as claimed in any one of the preceding claims which comprises an aperture through which a display screen of the carried mobile telephone can be viewed.

15

46. A mobile telephone carrying casing as claimed in claim 1 or any one of claims 3 to 45 which comprises an aperture through which an antenna of the carried mobile telephone can project.

20

47. A mobile telephone carrying casing as claimed in any one of the preceding claims which comprises an aperture through which the mobile telephone can be recharged.

25

48. A mobile telephone carrying casing as claimed in claims 42 to 47 wherein at least one of the apertures is shielded with a cover.

30

49. A mobile telephone carrying casing as claimed in claim 48 wherein the cover is retractable or removable.

35

50. A mobile telephone carrying casing as claimed in claim 48 or claim 49 wherein the cover is provided

WO 00/13330

PCT/GB99/02873

- 28 -

with electromagnetic radiation screening means to attenuate electromagnetic radiation.

51. A mobile telephone carrying casing as claimed in  
5 any one of the preceding claims which comprises components injection moulded from a thermoplastic.

52. A mobile telephone carrying casing as claimed in  
10 any one of the preceding claims which has components at least partially composed of Acrylonitrile Butadiene Styrene.

53. A mobile telephone carrying casing as claimed in  
15 any one of the preceding claims which has components at least partially composed of a polycarbonate material.

54. A mobile carrying casing as claimed in any one of  
20 the preceding claims which comprises a membrane key pad composed of a flexible material, which overlays the keys of an encased mobile telephone and which has keys which project through apertures in the casing, thus enabling activation of the keys of the encased  
25 mobile telephone by depression of the keys of the membrane key pad.

55. A mobile telephone carrying casing as claimed in  
30 claim 54 wherein the membrane key pad is attached to the remainder of the casing.

56. A mobile telephone carrying casing as claimed in  
claim 54 or claim 55 wherein the membrane key pad is at least partially shielded by at least one cover.

35 57. A mobile telephone carrying casing as claimed in



WO 00/13330

PCT/GB99/02873

- 29 -

claim 56 wherein the cover is retractable or removable.

58. A mobile telephone carrying casing as claimed in  
5 any one of claims 54 to 57 wherein the membrane keypad is provided with electromagnetic radiation screening means to attenuate electromagnetic radiation.

59. A mobile telephone carrying casing as claimed in  
10 any one of the preceding claims wherein at least one of the exterior surfaces of the components contains grooves which ease gripping and thus separation of the components of the casing.

60. A mobile telephone carrying casing as claimed in  
15 any one of the preceding claims further comprising attachment means for attaching the casing to clothing of a user.

61. A mobile telephone carrying casing as claimed in  
20 any one of the preceding claims further comprising attachment means for attaching the casing to a belt of a user.

62. A mobile telephone carrying casing as claimed in  
25 any one of the preceding claims further comprising attachment means for attaching the casing to a holster located in a fixed place, such as the dashboard of a car.

63. A mobile telephone carrying casing which can  
30 encase, contain, and protect a mobile telephone carried thereby, wherein:

the casing is an integer separate and independent  
35 from the carried mobile telephone which consists

WO 00/13330

PCT/GB99/02873

- 30 -

wholly or principally of a rigid plastics material;

the casing comprises at least two parts which can be separated to allow introduction of a mobile telephone between the parts and joined together to encase the introduced mobile telephone;

at least one part is provided with electromagnetic radiation screening means; and

the casing allows a user to operate the encased mobile telephone whilst carried in the casing.

64. A mobile telephone carrying casing as claimed in claim 63 wherein the electromagnetic radiation screening means provides a shield positioned between a head of a user and the encased mobile telephone.

65. A mobile telephone carrying casing as claimed in claim 63 or claim 64 wherein the electromagnetic radiation screening means causes attenuation of the electromagnetic radiation only on the side of the casing nearest a head of a user, the electromagnetic radiation being free to radiate from the remainder of the casing without attenuation.

66. A mobile telephone carrying casing as claimed in any one of claims 63 to 65 wherein the at least two casing parts define front and rear components, the front component encasing the front face of the mobile telephone and the rear component encasing the rear face of the mobile telephone, the components meeting in a line spaced apart from the front and rear faces of these components.

67. A mobile telephone carrying casing as claimed in any one of claims 63 to 66 wherein no part of the encased mobile telephone extends beyond the casing.

WO 00/13330

PCT/GB99/02873

- 31 -

69. A mobile telephone carrying casing as claimed in any one of claims 63 to 68 wherein the electromagnetic radiation screening means is selectively incorporated in one or more desired regions of the casing.

70. A mobile telephone carrying casing as claimed in any one of claims 63 to 69 wherein the electromagnetic screening means comprises a coating applied to a surface of one or more of the components of the casing.

71. A mobile telephone carrying casing as claimed in claim 70 wherein the coating contains metallic particles.

72. A mobile telephone carrying casing as claimed in claim 71 wherein the metallic particles are nickel.

73. A mobile telephone carrying casing as claimed in claim 71 wherein the metallic particles are copper.

74. A mobile telephone carrying casing as claimed in claim 71 wherein the metallic particles are silver.

75. A mobile telephone carrying casing as claimed in claim 71 wherein the metallic particles are gold.

76. A mobile telephone carrying casing as claimed in claim 71 wherein the metallic particles are alloys of two or more metals.

77. A mobile telephone carrying casing as claimed in claim 76 wherein the metallic particles are alloys of nickel and copper.

WO 00/13330

PCT/GB99/02873

- 32 -

78. A mobile telephone carrying casing as claimed in claim 76 wherein the metallic particles are alloys of nickel and silver.

5

79. A mobile telephone carrying casing as claimed in claim 76 wherein the metallic particles are alloys of nickel and gold.

10

80. A mobile telephone carrying casing as claimed in claim 76 wherein the metallic particles are alloys of copper and silver.

15

81. A mobile telephone carrying casing as claimed in claim 76 wherein the metallic particles are alloys of copper and gold.

20

82. A mobile telephone carrying casing as claimed in claim 76 wherein the metallic particles are alloys of silver and gold.

25

83. A mobile telephone carrying casing as claimed in any one of claims 70 to 82 wherein the coating is a paint.

30

84. A mobile telephone carrying casing as claimed in any one of claims 70 to 83 wherein the coating is sprayed on a surface of one or more components.

35

85. A mobile telephone carrying casing as claimed in any one of claims 70 to 84 wherein the coating is sprayed on an interior surface one or more components.

86. A mobile telephone carrying casing as claimed in any one of claims 70 to 83 wherein the coating is

WO 00/13330

PCT/GB99/02873

- 33 -

sprayed on a plurality of surfaces of one or more components.

5 87. A mobile telephone carrying casing as claimed in any one of claims 63 to 69 wherein the electromagnetic radiation screening comprises a mesh.

88. A mobile telephone carrying casing as claimed in claim 87 wherein the mesh comprises a metal.

10

89. A mobile telephone carrying casing as claimed in claim 87 wherein the mesh comprises an alloy of metal.

15

90. A mobile telephone carrying casing as claimed in claim 87 wherein the mesh comprises a composite material.

20

91. A mobile telephone carrying casing as claimed in any one of claims 87 to 90 wherein the mesh comprises apertures whose maximum dimension is less than one half of a wavelength of the smallest wavelength electromagnetic radiation emitted by the mobile telephone.

25

92. A mobile telephone carrying casing as claimed in any one of claims 63 to 91 wherein the electromagnetic radiation screening means provided in the casing forms a screen between a head of a user and the sources of electromagnetic radiation in the carried mobile telephone.

30

93. A mobile telephone carrying casing as claimed in any one of claims 63 to 92 wherein the electromagnetic radiation screening means is selectively positioned in the casing so that it does not impair the function of

35

WO 00/13330

PCT/GB99/02873

- 34 -

the mobile telephone.

5 94. A mobile telephone carrying casing as claimed in any one of claims 63 to 93 which comprises an aperture for alignment with an earpiece of the mobile telephone carried thereby.

10 95. A mobile telephone carrying casing as claimed in any one of claims 63 to 94 which comprises an aperture for alignment with a microphone of a mobile telephone carried thereby.

15 96. A mobile telephone carrying casing as claimed in any one of claims 63 to 95 which comprises an aperture through which function keys of the carried mobile telephone are accessible.

20 97. A mobile telephone carrying casing as claimed in any one of claims 63 to 96 which comprises an aperture through which a display screen of the carried mobile telephone can be viewed.

25 98. A mobile telephone carrying casing as claimed in any one of claims 63 to 66 or any one of claims 68 to 97 which comprises an aperture through which an antenna of the carried mobile phone can project.

30 99. A mobile telephone carrying casing as claimed in any one of claims 63 to 98 which comprises an aperture through which the mobile telephone can be recharged.

35 100. A mobile telephone carrying casing as claimed in any one of claims 94 to 99 wherein at least one of the apertures is shielded with a cover.

WO 00/13330

PCT/GB99/02873

- 35 -

101. A mobile telephone carrying casing as claimed in claim 100 wherein the cover is retractable or removable.

5 102. A mobile telephone carrying casing as claimed in claim 100 or claim 101 wherein the cover is provided with electromagnetic radiation screening means to attenuate electromagnetic radiation.

10 103. A mobile telephone carrying casing as claimed in any one of claims 63 to 102 which comprises components injection moulded from a thermoplastic.

15 104. A mobile telephone carrying casing as claimed in any one of claims 63 to 103 which has components at least partially composed of Acrylonitrile Butadiene Styrene.

20 105. A mobile telephone carrying casing as claimed in any one of claims 63 to 104 which has components at least partially composed of a polycarbonate material.

25 106. A mobile carrying casing as claimed in any one of claims 63 to 105 which comprises a membrane key pad composed of a flexible material, which overlays the keys of an encased mobile telephone and which has keys which project through apertures in the casing, thus enabling activation of the keys of the encased mobile telephone by depression of the keys of the membrane  
30 key pad.

107. A mobile telephone carrying casing as claimed in claim 106 wherein the membrane key pad is attached to the remainder of the casing.

WO 00/13330

PCT/GB99/02873

- 36 -

108. A mobile telephone carrying casing as claimed in claim 106 or claim 107 wherein the membrane keypad is provided with electromagnetic radiation screening means to attenuate electromagnetic radiation.

5

109. Use of a mobile telephone carrying casing as claimed in any one of the preceding claims to encase, contain and protect a mobile telephone, the mobile telephone already having a casing which is an integral part of the mobile telephone.

10

110. A method of encasing, containing and protecting a mobile telephone, and of screening electromagnetic radiation emitted by the mobile telephone, the method comprising the steps of:

15

providing a carrying casing which is an integer separate and independent from the carried mobile telephone which consists wholly or principally of a rigid plastics material, the casing comprising at least two separable parts having connecting means and an electromagnetic screening means,

20

separating the casing into the at least two parts;

introducing the mobile telephone to be carried into one of the separated parts; and

25

joining the at least two parts to encase the mobile telephone and using the connecting means to secure the casing; wherein:

the method allows a user to operate the mobile telephone whilst carried in the casing; and

30

the electromagnetic screening means attenuates electromagnetic radiation emitted by the carried mobile telephone.

35